Magnetic Properties of Magnetically Anisotropic Specimens of Ferromagnetic Powders

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between the texture and the specimen axis is denoted by φ.) A dependence is established of the character of the anisotropy of magnetization curves of magnetically textured specimens, made of thin powder of the MnBi alloy, on the dimensions of the powder particles. For certain particle dimensions, a magnetization process is observed in the longitudinally textured specimens which manifests itself in the fact that saturation is reached in fields of lower intensity than the maximum values of the residual magnetization and the coercive force. On the basis of the measured magnetization curves and of particular hysteresis cycles of isotropic and magnetically textured specimens of Mn-Bi alloys of various degrees of dispersion, it was established that in fine powders a magnetic transition structure from the multi-domain to the single-domain one as well as a single-domain structure can A model of the transient magnetic structure is exist. put forward.

There are 9 figures, 1 table and 7 references, 6 of which

Card 2/3 are Soviet and 1 French.

126-5-3-6/31 Magnetic Properties of Magnetically Anisotropic Specimens of Ferromagnetic Powders

ASSOCIATION: Institut Fiziki Metallov Ural'skogo Filiala AN SSSR (Institute of Metal Physics, Ural Branch of the Ac.Sc., USSR)

SUBMITTED: May 17, 1957

: 1. Metal powders--Magnetic properties 2. Ferromagnetic materials -- Preparation 3. Hysteresis

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

AUTHORS: Shur, Ya. S., Shtol'ts, Ye. V. and Kandaurova G. S.

TITLE: The Magnetic Properties of Magnetically Anisotropic Specimens Made of Ferromagnetic Powders (Magnitnyye svoystva magnitno-anizotropnykh obraztsov iz ferromagnitnykh poroshkov) II. The Dependence of the Curves of Magnetization on the Method of Obtaining the Demagnetised State (II Zavisimost' krivykh namagnichivaniya ot sposoba polucheniya razmagnichennogo sostoyaniya)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1957. Vol.V, Nr 3, pp 421-427 (USSR)

ABSTRACT: A series of powders each with a uniform particle size.

lying in the range 250 to 4u, was made from a manganesebismuth alloy containing about 50% ferromagnetic phase.

Magnetised dies were prepared from the powders by mixing
them with a suitable filler, pouring into a mould,
fusing at about 60°C and cooling in a magnetic field.
The dies were then demagnetised either by cooling to
-196°C in an alternating field, or at room temperature, by
using a field of variable magnitude but constant sign to
return the material to the demagnetised state from the
appropriate point on one or other branch of the hysteresis
loop. A part of the paper is devoted to the study of

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The Magnetic Properties of Magnetically Anisotropic Specimens Made of Ferromagnetic Powders II. The Dependence of the Curves of Magnetization on the Method of Obtaining the Demagnetised State

these 'curves of return'. Subsequent remagnetization to saturation was shown to follow a course dependent on the mode of demagnetization. Demagnetization by the first method permitted rapid remagnetization. After demagnetization at room temperature by a field of the same sign as the original magnetization, the remagnetization curve assumed a step-like form except at large particle sizes. If, however, the specimen was demagnetised by a field of opposite sign, remagnetization proceeded comparatively smoothly except at the lowest particle sizes when the curve again had a steplike appearance. An attempt is made to explain the observations qualitatively in terms of a transient magnetic structure intermediate between the single and many domained In presence of such a structure in the direction along the axis of the texture of magnetically anisotropic specimens, a fundamental role in the process of magnetization is played by the hysteresis in the formation and growth of remagnetization nuclei. There are 8 figures and 2 references, both of which are

Card 2/3

Soviet.

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The Magnetic Properties of Magnetically Anisotropic Specimens Made of Ferromagnetic Powders II. The Dependence of the Curves of Magnetization on the Method of Obtaining the Demagnetised State

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR (Institute of Metal Physics, Ural Branch of the Ac.Sc., USSR)

SUBMITTED: May 17, 1957

1. Metal powders--Magnetic properties 2. Ferromagnetic materials -- Test methods

Card 3/3

AUTHORS: Kandaurova G. S., Shur, Ya. S. and Shtol'ts, Ye. V.

TITLE: The Magnetic Properties of Magnetically Anisotropic Specimens Prepared from Ferromagnetic Powders. (Magnitnyye svoystva magnitno-anizotropnykh obraztsov iz ferromagnitnykh poroshkov). III. Anisotropy in Magnetic Properties (Anizotropiya magnitnykh svoystv)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, Nr 2, pp 229-236 (USSR)

ABSTRACT: The domain structures of powders of MnBi alloy and Co are determined from disc-shaped specimens prepared from powders of 1 to 100 μ in particle size. The Mn-Bi alloy was prepared by sintering the components at 320°C; MnBi content about 50%. The sinter was powdered and used without annealing. The Co was powdered from a piece of cast metal and annealed in vacuo at 600°C. (The method of preparing the discs is not described). Fig.l shows the magnetization curve for an MnBi disc of particle size 25 μ, with various angles φ between the field and texture axes. Fig.2 gives the corresponding hysteresis loops. Fig.3 shows a polar diagram of the coercive force for MnBi discs of various particle sizes (texture

The Magnetic Properties of Magnetically Anisotropic Specimens Prepared from Ferromagnetic Powders. III. Anisotropy in Magnetic Properties

axis horizontal). Fig.4 shows how the coercive force of MnBi varies with particle size for two values of ϕ ; Fig.5 resembles Fig.3 but the residual magnetization is shown instead. Figs. 6 and 7 are analogous to Figs. 1 and 3 respectively, for Co powder of 4 μ particle size; Fig.8 is analogous to Fig.4 and Fig.9 to Fig.5. The results are discussed in the light of the prediction that single-domain particles should occur in larger sizes the higher the anisotropy constant and saturation magnetization. The results agree with this prediction in general, but the precise shapes of the theoretical curves (shown dashed in Figs.10 and 11) are not the same as those found by experiment for MnBi of 4μ particle size. Some of these effects can be attributed to the method used for demagnetizing the MnBi powder (decreasing alternating

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The Magnetic Properties of Magnetically Anisotropic Specimens Prepared from Ferromagnetic Powders. III. Anisotropy in Magnetic Properties

field at liquid nitrogen temperature). There are 4 equations, 11 figures and 8 references, 6 of which are Soviet, 2 English.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR (Institute of Metal Physics, Ural Branch of the Ac.Sc., USSR) and Ural'skiy gosudarstvennyy universitet imeni A.M.Gor'kogo (Ural State University imeni A.M.Gor'kiy)

SUBMITTED: May 17, 1957

Card 3/3

1. Ferromagnetic materials--Magnetic properties
2. Alloys-Sintering
3. Powders--Applications
4. Alloys--Heat treatment

AUTHORS: Shur, Ya. S., Shtol'ts, Ye. V. and Kandaurova, G. S.

TITLE: Magnetic Properties of Magnetically Anisotropic Specimens of Ferro-magnetic Powders. IV. Temperature Dependence of Magnetic Properties of Powdered Specimens of the Alloy MnBi (Magnitnyye svoystva magnitne-anizotropnykh obraztsov iz ferromagnitnykh poroshkov. IV. Temperaturnaya zavisimost' magnitnykh svoystv poroshkovykh obraztsov splava MnBi)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1959, Vol 6, Nr 3, pp 420-425 (USSR)

ABSTRACT: Previous papers of this series were published in Nrs 5 and 6 of the present journal (1957, Refs.1-3). The anisotropy of the coercive force in powdered specimens of MnBi in the temperature region -196 to +20°C has been studied and results are now reported. A study was made of the magnetisation curves, recovery curves and other features of the hysteresis loops at a temperature of -196°C. It is shown that when the temperature of finely powdered specimens is reduced from +20° to -196°C, the form of the magnetic structure of the particles changes due to a reduction in the constant of anisotropy. A study of the temperature dependence of the magnetic properties of specimens of MnBi powders of different dispersity has shown that in the same

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Magnetic Properties of Magnetically Anisotropic Specimens of Ferro-Magnetic Powders. IV. Temperature Dependence of Magnetic Properties of Powdered Specimens of the Alloy MnBi

specimens at different temperatures the existence of magnetic structure of different form may be observed. Thus, the transition structure which is present at room temperature in fine powders $(1-10~\mu)$ disappears at $-196^{\circ}C$ and instead of it a multidomain structure is found. This is connected with the reduction in the constant of anisotropy at low temperatures. There are 6 figures, 1 table and 11 references, of which 8 are Soviet, 2 French and 1 German.

ASSOCIATION: Institut fiziki metallov Ural'skogo filiala AN SSSR (Institute of Physics of Metals, Ural; Branch, Academy of Sciences USSR)

SUBMITTED: June 21, 1957.

- 1. Bismuth-manganese powder alloys--Magnetic properties
- 2. Bismuth-manganese powder alloys--Temperature factors

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AUTHORS:

Shtol'ts, Ye. V., Shur, Ya. S., Kandaurova, G. S.

SOV/48-22-10-20/23

TITLE:

On the Anisotropy of the Coercive Force in Magnetically Anisotropic Samples of Fine Powder (Ob anizotropii koertsitivnoy sily v magnitnoanizotropnykh obraztsakh iz tonkikh poroshkov)

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1958, Vol 22, Nr 10, pp 1269 - 1272 (USSR)

ABSTRACT:

In the present paper the authors give a report on measurements of the coercive force of uniaxial magnetic powder produced from the following substances: Cobalt, Mn-Bialloy, magnetite, and iron-y-oxide. The angular dependence of the coercive force of various powder samples is shown in figure 1. A comparison of the curves shows that in textured samples made of magnetically uniaxial powders the angular dependences of H may exhibit a different character.

The process of the technical magnetization in directions close to the axis of texture differs from the process of irreversible rotation. Probably this is caused by the fact

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APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

On the Anisotropy of the Coercive Force in Magnetically Anisotropic Samples of Fine Powder

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that the one-domain structure in the particles has not yet completely been reached. The investigation of other rules governing the magnetic properties of fine powders results in the assumption that these particles exhibit a particular domain structure (Ref 4): In one particle only one basic domain and several closing domains exist. As a consequence of this the formation, the growth, and the diminuition of the closing domains plays a decisive role in the process of technical magnetization. The assumption of the existence of such a domain structure is confirmed by observations of powder patterns (Ref 5). In the case of a poly-domain structure the coercive force varies inversely as $\cos \psi$ (Ref 6).

Therefore the coercive force increases with increasing angle φ . A complicated dependence of $H_{c}(\varphi)$ exhibiting a

maximum at a certain value of φ which varies between $\beta=0$ and $\psi=90^\circ$ may be expected. Such a regularity was observed in samples of cobalt, magnetite, and iron-y-oxide powder. In this case the structure apparently approximates the polydomain structure. The magnitude of H of these powders,

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On the Anisotropy of the Coercive Force in Magnetically Anisotropic Samples of Fine Powder

507/48-22-10-20/23

however, is considerably higher than that of the respective massive substances. In the examined substances a change of the anisotropic character was not observed when the dimensions of the particles were modified. A change in the anisotropy of H_c together with the dimination of the particles was found in the investigation of magnetically anisotropic samples consisting of powder of the "low-coercive" Mr.-Bi alloy. The dependence of H_c (γ) found in this instance is given in figure 2. In powder of the low-coercive Mn-Bi alloys the diminition of the particles leads to a change in their magnetic structure which han be determined from the shape of the angular dependence of the coercive force. The observation results and their analysis show that in magnetically arisotropic ferromagnetics the data on the anisotropy of the coercive force besides other characteristics may give certain indications concerning the magnetic structure. There are 2 figures and 7 references, 5 of which are Soviet.

Card 3/4

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On the Anisotropy of the Coercive Force in Magnetically Anisotropic Samples of Fine Powder

SOV/48-22-10-20/23

ASSOCIATION: Institut fiziki metallov Akademii neuk SSSR (Institute of Metal Physics, AS UBSR) Fiziko-matematicheskiy febulitet Urul'skogo gos. universiteta (Physics and Mathematics Dept. at the Ural State University)

Card 4/4

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

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TITLE:

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SOV/126-8-5-5/29

Shur, Ya.S., Shtolits, Ye.V., Kandaurova, G.S., and AUTHORS:

Redneva, L.V.

The Temperature Dependence of Magnetic Properties

MnBi Alloy Powder Samples with Magnetic Texture

PERIODICAL: Fizika metallov i metallovedeniye, Vol 8, 1959, Nr 5, pp 678-684 (USSR)

ABSTRACT: The authors studied the temperature dependence of magnetic properties of samples made of the MnBi alloy powder. This alloy has a very high magnetic anisotropy constant K at room temperature (Ref 4) and a high value of the critical particle size, dcr (below this size the powder particles exist in monodomain state only). On lowering of temperature the value of K falls sharply and this is accompanied by a sharp fall of the critical particle size der, which is a function of K. follows that on lowering of temperature the magnetic structure of MnBi alloy powders will be altered (a polydomain-monodomain transition will occur) and this Card change of structure will affect some magnetic properties. 1/5 Consequently we can make some deductions about the structure of this magnetically uniaxial material from

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5" 67753 \$07/125-8-5-5/29

The Temperature Dependence of Magnetic Properties of MnBi Alloy Powder Samples with Magnetic Texture

the temperature dependence of its magnetic properties. The alloy was produced by heating powders of Mn and Bi together at 300 °C and its coercive force was of the order of 1000 Oe. The alloy was powdered mechanically and several fractions of the powder with particle size from 2 to 20 µ were obtained. Samples were made from each fraction by mixing the powder with a binder and by placing this mixture in a disk-like form and allowing it to set between two poles of an electromagnet. In this way magnetically textured samples were obtained whose texture axis lay along the direction of the electromagnet field. Magnetic properties were measured between 20 and -150 oc using a ballistic throw method. Samples were demagnetized at the temperature at which a particular set of measurements were carried out by a suitable constant magnetic field in the reverse direction. The angular dependences of the coercive force and residual magnetization were obtained, magnetization curves were recorded and dependence of the residual magnetization (for partial magnetization cycles) on the magnitude of W

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The Temperature Dependence of Magnetic Properties of MnBi Alloy Powder Samples with Magnetic Texture

powders with 30 and 3 μ particle size (curves 1 and 2 respectively). Fig 4a shows the 20 °C dependence of the relative magnetization I/Is (curve 1) and the relative residual magnetization Ir/Is (curve 2) on the magnetic field intensity along the texture axis (The results of Figs 4a, 4b and 4B all refer to a sample made of powder with 6 µ particle size). Figs 4b and 4B give the same dependences at -37 °C and at -60 °C. The authors draw the following conclusions from their 1) On lowering of temperature the curves representing the angular dependence of the coercive force depart more and more from the theoretical curve $H_{C}(\psi)$ for a monodomain sample. This is due to a decrease of the anisotropy constant and consequent lowering of the magnitude of dcr as a result of which the magnetic structure of powder particles changes gradually from monodomain to polydomain type. 2) At room temperature, when the anisotropy constant K and the critical particle size der are large, the residual magnetization produced by partial magnetization

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The Temperature Dependence of Magnetic Properties of EmBi Alloy Powder Samples with Magnetic Texture

cycles is close to the maximum magnetization of a complete cycle and the maximum residual magnetization is reached in the saturation field, i.e. the magnetic structure is practically monodomain. On lowering of temperature the values of K and der decrease and the maximum residual magnetization remains close to the saturation magnetization but is reached in fields larger than the saturation field (transition structure). At low temperatures, i.e. when K and der are low, the residual magnetization is small and is reached in fields lower than the saturation field (polydomain structure).

Card 5/5

There are 4 figures and 5 references, of which 3 are Soviet, 1 is English and 1 is French.

ASSOCIATION: Institut fiziki metallov, AN BUDR

(Institute of Physics of Betals, leademy of Sciences

U.SR)

SUBMITTED:

July 18, 1959

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

KANDAUROVA, G.S

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E073/E335

AUTHOR:

Kandaurova, G.S. and Shur, Ya.S.

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TITLE:

Certain Magnetic Properties of Manganese - Bismuth

Alloy Powders V

PERIODICAL: Fizika metallov i metallovedeniye, 1960, Vol.10, No.1, pp 37 - 41

TEXT: In earlier published work (Refs. 1 and 2) the authors detected a number of features in manganese-bismuth alloy powders which could be explained on the assumption that such powders possess a particular type of magnetic structure, a transient structure. Later on, this structure was detected experimentally by means of the powder-pattern method (Ref. 3). The properties of the artificially textured powders were determined not only by the magnetic structure of the ferromagnetic particles but also by the presence of a magnetic structure, i.e. by the parallel orientation of the axes of easy magnetization of the individual particles. The authors considered it of interest to make a special study of the magnetic properties of isotropic (pseudocrystalline) specimens from manganese-bismuth powders of various degrees of dispersion. It can be assumed in such a case that Card 1/3

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Certain Magnetic Properties of Manganese - Bismuth Alloy Powders

the magnetic properties of specimens are determined solely by the magnetic structure of the alloy. In the experiments, a magnetically uniaxial highly coercive MnBi alloy (H $_{\rm C} \sim 1000$ Oe) was studied. The grain size varied between

720 and 6 µ and the coercive force varied correspondingly between 1350 and 7000 Ce. The specimens were produced from powders of certain grain sizes which were carefully mixed with a binder and the mixture was poured into a mould 15 mm dia., 2 mm high. After hardening of the binder, disc-shaped specimens were obtained which consisted of randomly orientated MnBi particles interspaced with nonferromagnetic interlayers. The concentration of the MnBi powder in the specimens did not exceed 15% in volume. This quantity was sufficient for measuring the magnetic properties by means of a ballistic method but the concentration was low enough to disregard the magnetic interaction between the individual particles. Before the actual measurements the specimens were demagnetized by using three differing methods. The results of the measurements are

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Certain Magnetic Properties of Manganese - Bismuth Alloy Powders

plotted in Figs. 1-4. These show that the properties of the specimens were similar to those observed earlier in investigating magnetically anisotropic pseudo-single crystals of powder specimens and are due to the existence in the fine particles of a particular magnetic structure which is intermediate between multi- and single-domain magnetic structures. There are 4 figures and 7 Soviet references.

ASSOCIATION:

Ural'skiy gosudarstvennyy universitet im.

A.M. Gor'kogo (Ural State University im.

A.M. Gor'kiy)

SUBMITTED:

February 8, 1960

Card 3/3

KANDAURCVA, G.S.; SHUR, Ya.S.

Gertain magnetic properties of mangenese-biamuth alloy powders.

Fix.met.i metalloved. 10 no.1:37-41 J1 "60. (MIRA 13:8)

1. Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo.
(Mengenese-biamuth alloys--Magnetic properties)
(Metal powders---Magnetic properties)

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Example Representation of the magnetic structure of a cobalt crystal on its size. Zhur. eksp. i teor. fiz. 38 no.1:60-63 Jan '60.

(MIRA 14:9)

1. Ural'skiy gosudarstvennyy universitet.

(Cobalt crystals--Magnetic properties)

L 18104+63 EWT(1)/EWP(q)/EWT(m)/BDS/ES(s)-2 ASD/AFFTC/ESD-3/IJP(C)/
SSD Pad/Pt-4 JD/HW
ACCESSION NR: AP3002842 S/0126/63/015/006/0839/0845

AUTHORS: Kandaurova, G. S.; Slaur, Ya. S.

74

TITLE: Domain structure of a cobalt monocry

72

TITLE: Domain structure of a cobalt monocrystal

SOURCE: Fizika metallov i metallovedeniya, v. 15, no. 6, 1963, 839-845

TOFIC TAGS: domain structure, cobalt monocrystal, powder figure, effect of magnetic field

ABSTRACT: The domain structure variation on the basal plane of a cobalt monocrystal has been observed. This structure consists of a maze representing the cutlets of the basic spontaneous magnetization domains on the basal plane of the crystal. The sample was placed into a magnetic field with intensity of about 20 000 e; it was oriented parallel to the plane (the horizontal field) and also perpendicular to the plane (vertical field). The maze pattern was obtained after the crystal cooled below the Curie point and after the sample was demagnetized by a field parallel to its hexagonal axis. It was established that powder figures consisting of star patterns are formed under the action of a magnetic field perpendicular to the axis of light magnetization. The rows of stars were oriented in the direction perpendicular to the external magnetic field. This structure was preserved also in the remnant

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L 18104-63 ACCESSION NR: AP3002842 2

magnetization state of the sample. It is believed that in the latter case the internal crystalline structure approximates the simplest domain structure of plane parallel layers. Orig. art. has: 3 figures.

ASSOCIATION: Ural'skiy gosuderstvenny*y universitet im. A. M. Gor'kogo (Ural State University); Institut fiziki metallov AN SSSR (Institute of Physical Metallurgy.

Academy of Sciences, SSSR)

SUBMITTED: 28Jul62

DATE ACQ: 23Jul63

ENCL: 00

SUB CODE: ML

NO REF SOV: 003

OTHER: 006

Card 2/2

SHUR, Ya.S.; KANDAUROVA, G.S.

Observation of the initial stages of the formation of remagnetization muclei in a magnetoplumbite crystal. Fiz. met. i. metalloved. 16 no.1: 158-160 Jl 163. (MIRA 16:9)

1. Institut fiziki metallov AN SSSR i Ural'skiy gesudarstvennyy universitet imeni A.M.Gor'kogo.
(Magnetoplumbite) (Magnetization)

KANDAUROVA, G.S.; SHUR, Ya.S.

Characteristics of the domain structure in single crystals of magnetoplumbite. Fiz. met. i metalloved. 16 no.2:310-311 Ag '63.

(MIRA 16:8)

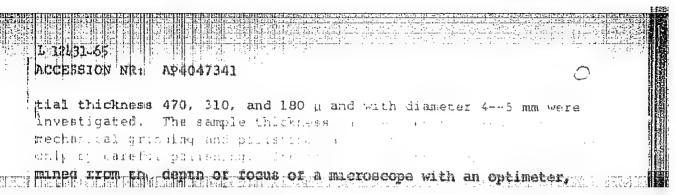
1. Ural'skiy gosudarstvennyy universitet im. A.M. Gor'kogo i Institut fiziki metallov AN SSSR.

(Magnetoplumbite) (Domain structure)

ENT(1)/ENT(m)/SWP(t)/EED-2/EEP(b) LIP(c)/ASD(d)/ESD(do) ID 8/01.9/64/000/005/0012/0017 ACCHSSION NR: AP4047341 AUPHOR: Kan laurva, G. 5.

TITLE: Dependence of the domain structure of a barium ferrita the Administration Boson

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"



ACCESSION NR: AP4023406

5/0048/64/028/003/0553/0558

AUTHOR: Shur, Ya.S.; Glazer, A.A.; Dragoshanskiy, Yu.N.; Zaykova, V.A.; Kandaurova, G.S.

TITLE: Regarding departures from homogeneity of magnetization within ferromagnetic domains /Report, Symposium on Ferromagnetism and Ferroelectricity held in Leningrad 30 May to 5 June 1963/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v.28, no.3, 1964, 553-558

TOPIC TAGS: ferromagnetic domains, ferromagnetic domain inhomogeneity, magnetization.reversal nuclei

ABSTRACT: This paper is a short summary of investigations, conducted in the Ferromagnetic Laboratory of the Institute of Metal Physics of the Academy of Sciences, SSSR, concerning departures from homogeneity of magnetization within ferromagnetic domains. The early stages of the formation of magnetization reversal nuclei on the basal plane surface of a magnetoplumbite crystal, and their development into domains was observed by means of powder patterns. Motion pictures of this process were made, and several frames are reproduced. As the magnetizing field (perpendicular to the crystal surface) was gradually reduced from saturating values, the powder pattern,

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ACCESSION NR: AP4023406

initially featureless, first showed large (~0.1 mm) circular bright spots. These decreased in size, increased in number, became irregular in shape, and finally some of them could be seen to grow into twisting domains of opposite magnetization. The initial large spots revealed by the powder pattern are ascribed to "spin vortices", regions in which the spins are inclined to the surface in a circular pattern. These arise because they provide partial flux closure within the crystal, thus reducing the surface energy. As the magnetizing field decreases, the spin inclinations increase, and the disturbance penetrates more deeply into the crystal. Finally spin reversal occurs in the center of the vortex, and a reverse magnetization nucleus is formed. These nuclei grow into spike shaped domains. If this interpretation of the observations is correct, the intersections of the wall of such a spike domain with a plane parallel to the magnetic axis should have opposite polarities; this was observed to be the case in cobalt. The domains in Co and in MnBi alloy were observed to increase in size with increasing temperature, although the saturation magnetization did not change significantly over the temperature range concerned, the crystal anisotropy decreased markedly, and no domains of closure could be found. This behavior is ascribed to spin disorientation at the higher temperatures, resulting in internal flux closure and decreased surface energy. This interpretation is supported

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ACCESSION NR: AP4023406

by the fact that the contrast of the domains as observed with the longitudinal kerr effect, as well as that of the spots on the basal plane as observed with the polar kerr effect, decreased with increasing temperature. This increase in spin disorientation with increasing temperature could be due to increasing influence of crystal imperfections as the crystal anisotropy decreases. The magnetostriction of silicon in the [100] direction, which should vanish in an ideal crystal, was found to depend strongly on the annealing process to which the crystal had been subjected. The less thoroughly annealed specimens showed greater magnetostriction and less perfect domain structure. This indicates departure from uniform magnetization within the domains due to crystal imperfections. It is concluded that investigation of the departure from homogeneity of the magnetization within the domains is prerequisite to a deep understanding of various properties of ferromagnetic materials.

ASSOCIATION: Institut fiziki metallov Akademii nauk SSSR (Institute of Physics of Metals, Academy of Sciences, SSSR)

SUBMITTED: 00

SUB CODE: PH

DATE ACQ: 10Apr64

NR REF SOV: 002

ENCL: 00

OTHER: OOO

Card 3/3

KANDAUROVA, G.S.; SHUR, Ya.S.; GUSEL'NIKOVA, N.I.

Certain characteristics of the domain structure of a cobalt crystal. Fiz. met. i metalloved. 18 no.4:530-534 0 '64. (MIRA 18:4)

2010年2011年2月2日中央共通2012年12月2日1日前日午12天251年代月日提出254日1日1日

1. Ural'skiy gosudarstvennyy universitet imeni Gor'kogo i Institut fiziki metallov AN SSSR.

KANDAUROVA, G.S.; SHUR, Ya.S.

Nucleation and formation of a domain structure in magnetically uniaxial ferromagnetic materials. Part 1. Fiz.-met. i metalloved. 20 no.5:673-682 N. 65. (MIRA 18:12)

1. Uraliskiy gosudarstvennyy universitet imeni A.M.Gorikogo i Institut fiziki metallov AN SSSR. Submitted April 6, 1965.

तः । १९ वः (१०) । । । अस्य विश्वास्थान् । सामान्य । । । । । । । । । । । । । । । । । । ।	
1. 020005-07 Mar(e)/Mar(m) ACC NR: AP6027783)/EWP(w)/EWP(t)/ETI/EWP(k) 1JP(c) JD/JH SOURCE CODE: UR/0126/66/022/001/0039/0044
AUTHOR: Shur, Ya. S.; Kanda	aurova, G. S.; Magat, L. M.; Bykhanova, N. N.
ORG: Institute of Metal Physic University im. A. M. Gor'kiy	es, AN SSSR (Institut fiziki metallov AN SSSR); Ural State (Ural'skiy gosuniversitet)
	of powders of a high-coercivity Mn-Al alloy
SOURCE: Fizika metallov i me	etallovedeniye, v. 22, no. 1, 1966, 39-44
TOPIC TAGS: aluminum alloy, magnetic coercive force	magnesium alloy, powder metal property, magnetic property,
the coercive force of Mn-Al alle composition of powders of a Mn icle size (2 to 800 \mu) and heat to series was obtained by pulveriz	ate the mechanism of the processes leading to the increase in oy when in powdered state, the magnetic properties and phase n-Al alloy (71 wt. % Mn) were investigated as a function of part-reatment. Two series of powders were considered: the first sing the alloy when it was in ferromagnetic state (homogeni-
zation at 1100°C with cooling in a	air at the critical rate of 20°C/sec, leading to the formation of agnetic T-phase); the second series was obtained by pulver-
Card 1/3	UDC: 538.245/.248

L 09006-67 ACC NR: AP6027783

izing the alloy when it was in nonferromagnetic state (quenching in water following homogenization at 1100°C) and in this case the high-temperature paramagnetic €- phase was deformed by supercooling. The magnetic properties of the specimens were measured in fields of up to 32,000 oe by the ballistic method, while their phase composition was determined from debyegrams. Findings: for both series of powder specimens coercive force H increases and specific magnetization omax decreases with decrease in particle size. Thus, a particle size decreases from 500 to 2 μ , H_c increases from 1300-2000 oc to 5000 oc, while specific magnetization then decreases 4-7 times for powders in the first series and about 2 times for powders in the second series. An examination of the anisotropy of coercive force in the specimens warrants the assumption that for specimens with particle size of <4 µmagnetic properties are primarily determined by particles with a nearly monodomain structure, and it is this that accounts for the increase in coercive force. The decrease in specific magnetization with decrease in particle size is attributed to the dis-ordering of the magnetic T-phase and the formation of paramagnetic equilibrium phases. Deformation of the alloy apparently leads to a decrease in the effective dimension of ordered regions of the ferromagnetic \u03c4-phase and to greater isolation of these regions from each other within the powder particles. This complicates the processes of magnetization reversal and increases the coercive force. The decrease in the effective size of the T-phase may be attributed, for the first series of powders, to local dis-ordering of the \u03c4-phase during pulverization of the alloy in ferromagnetic state, and for the

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

L. 09006-67
ACC NR: AP6027783

second series of powders — to the formation of nonmagnetic equilibrium phases. "The authors consider it their pleasant duty to express their appreciation to L. V. Smirnov for providing the Mn-Al alloy." Orig. art. has: 2 figures, 1 table.

SUB CODE: 11,13,20/SUBM DATE: 01Dec65/ORIG REF: 002/OTH REF: 005

L 08759-67 EWT(m)/EWP(t)/EFI _IJP(c) ACC NA: APG020126 JD SOURCE CODE: UR/0048/66/030/006/1030/1034 MUTTION: Mandaurova, G. S.; Shur, Ya. S. OM: Institute of Metal Physics, Academy of Sciences, SSSR (Institut fiziki metallov 11 Aliademii nauk SSUR); Ural State University (Ural'skiy gosüdarstvennyy universitet) TITLE: Concerning the domain structure of magnetoplumbite Report, All-Union Conference on the Physics of Ferro- and Antiforromagnetism held 2-7 July 1965 in Sverdlovsk/ SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 6, 1966, 1030-1034 TOPIC TAGS: ferromagnetism, magnetic domain structure, single crystal, lead compound, ABSTRACT: The authors have employed the powder pattern technique to investigate the domain structure on the basal planes of PbO'6Fc2O3 crystals. The investigation was

undertaken because the theory of J.Kaczer and R.Gemperle (Ceckosl. J. Physics, Bll, No. 3, 152 (1961)) does not account for the laminar domains with walls perpendicular to the magnetizing field that have been observed in uniaxial cobalt and magnetoplumbite crystals when the magnetizing field is perpendicular to the easy magnetization axis; the accumulation of more experimental data is regarded as a necessary first step toward the improvement of the theory of magnetic switching in uniaxial crystals.

Card 1/2

HEADELEC BEEF

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

L 08759-67 ACC NR. 7.28029123

The specimens were 0.68 to 2.4 mm thick plates with areas from 20 to 30 mm². The newder patterns were observed on cleaved faces, which required no further processing. The angle 0 between the magnetizing field and the hexagonal [0001] axis could be determined within ± 1°, and the magnetizing field could be varied from zero to 20 kOo. Powder patterns were recorded in magnetizing fields of different strengths and at angles 6 ranging from 70 to 90°. Seventeen powder pattern photographs are presented and discussed. It is concluded from the observed domain structures that magnetization switching in directions nearly perpendicular to an easy magnetization axis is effected by formation and growth of nuclei of the new magnetic phase. The mechanism of nucleus formation and growth is discussed, but definite conclusions concerning that mechanism cannot be drawn from the available data. Orig. art. has: 4 figures.

SUB CCDE: 20/

SURM DATE: 00/

ORIG REF: 006/

OTH REF: 003

0

Card 2/2 bc

1. KURNAKOV, N. S.; LEPESHKOV, I. N.; KANDAURCVA, V. F.

- 2. USSR (600)
- 4. Potassium Salts Volga Emba Region
- 7. Potassium salts of the Volga-Emba and Carpathian Mountain region and their effectiveness as fertilizers, Izv. Sekt. fiz.-khim. anal. 16, No. 3, 1948.

9. Monthly List of Russian Accessions, Library of Congress, 11ay 1953. Unclassified.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

VOLKOVA, H.I., nauchnyy sotrudnik; KANDAUROVA, Ye.I., nauchnyy sotrudnik

Sanitary and hygienic aspacts of working conditions on tractors and combines with combustion and electric motors. Gig. i san. 21 no.4: 22-27 Ap '56. (MIRA 9:7)

l. Iz Nauchno-issledovatel skogo sanitarnogo instituta imeni Erismana

(AGRICULTURE

hyg. aspects of operation of tractors with electric & combustion motors (Rus))

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

KANDAUROVA, Ye.I.

Noise and vibrations produced by agricultural machinery. Gig. truda 1 prof. zab. 4 no.3:23-28 Mr '60. (MIRA 15:4)

1. Moskovskiy nauchno-issledovatel'skiy institut sanitarii i gigiyeny imeni F.F.Erismana.
(NOISE) (AGRICULTURAL MACHINERY--VIBRATION)

KANDAUROVA, Ye.I.

Hygienic working conditions on self-propelled combines. Gig. i san. no. 10:46-51 0 160. (MIRA 13:12)

1. Iz Moskovskogo nauchno-issledovatel skogo instituta sanitarii i gigiyeny imeni F.F. Erismana Ministerstva zdravookhraneniya RSFSR.

(COMBINES (AGRICULTURAL MACHINERY)
(AGRICULTURE—HYGIENIC ASPECTS)

VQLKOV, A.H.; KANDAUROWA, Ye.I.; RUMYANTSEV, G.I.

Experimental study of the effect of general vibrations on the organism.

Experimental study of the effect of general vibrations on the organism.

Uch. zap. Mosk. nauch.-isai.inst.san. i gig. no.7:10-13 '60.

(VIBRATION_PHYSIOLOGICAL EFFECT)

(VIBRATION_PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

Effect of general vertical vibrations on the human organism. Uch. 2ap. Mosk.nauch-issl.inst. san. i gig. no.7: 14-16 '60.

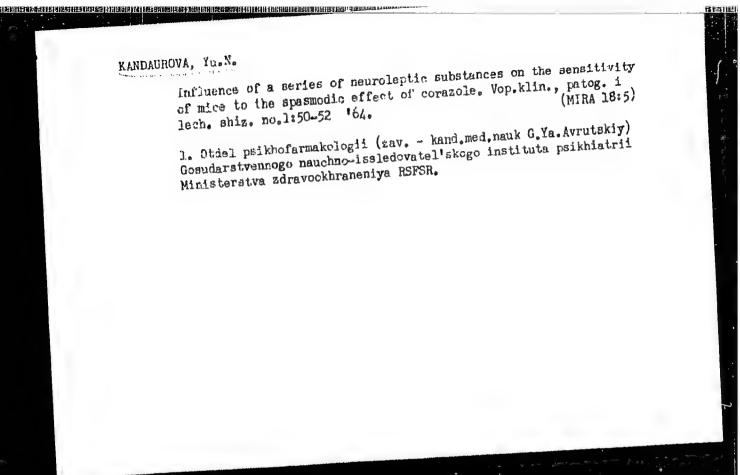
(VIBRATION_PHYSIOLOGICAL EFFECT)

。 1987年 新华安全文本年度 新克茨克特 1987年 1

KANDAUROVA, Ye.I., vrach; MAZUNINA, G.N., kand.med.nauk; PRON'KOVA, Ye.P. vrach; TORUBAROVA, N.A., vrach; SHATALOV, N.N., kand.med.nauk; SIDEL'NIKOVA, T.Y., kand.med.nauk; SHCHECHKIN, V.N., kand.med.nauk.

|監計開料再接套||項

Hints of the "Zdorov'e". Zdorov'e 9 no.5:30-31 My'63.
(HYGIENE)



L 00881-57 EWT(d)/EWP(e)/EWP(v)/T/EWP(k)/EWP(h)/EWP(1)/EWT(m) WH/WW/DS	
ACC NR AP6019848 SOURCE CODE: UF	R/0418/66/000/001/0025/0027
AUTHOR: Kandayan, S. C. (Engineer); Mndzhoyan, K. A. (Car	ndidate of technical scien-
ces); Gevorkyan, E. P. (Engineer)	52
ORG: None	\mathcal{B}
TITLE: The MA-459 vibroprofiling machine	
SOURCE: Tekhnologiya i organizatsiya proizvodstva, no. 1	1966, 25-27
the control of the control of the first of the control of the cont	
TOPIC TAGS: electroerosion machining, carbon electrode, graphite, vibration effect	
anomnous man nutbour docaribe the Ma_150' vibroprofiling machine designed for forming	
the graphitized carbon electrodes use as the tool in electroerosion machining. This machine is much more productive than the conventional method of turning the surfaces	
las manual ution for those also trodes on latings and nand linishing one plant our recovery	
Imba not machine also produces electrodes of higher quality. The machine constant	
a stand, vibroprofiling head, tailstock, hydraulic feed unit and dust remover. The vibroprofiling head is designed for vibrating the master cutting tool which is fastened	
is a suite who well also relation is transmitted through an eccentric of this character is	
late to the property of the prince of large mechanism for plane parallel mouton. The number	
of vibrations of the cutting tool is changed by using a four-speed electric drive. The profiling head has a special planetary mechanism for continuous control of the ampli-	
profiling head has a special planetary mechanism for con-	11
TING.	621.924.6:621.3.035.2.002.2
Cala 3/E	021.924.0.021.3.032.23

1 00R81-67 ACC NR. AP6019848 1) tude (radius of circular motions) of tool vibration. The tailstock is a conventional hydraulic cylinder with the piston rod connected to a second chuck for holding the electrographite stock. The hydraulic feed mechanism has a rotary pump with an electric drive. The pump provides the axial pressure necessary for machining the electrographite. The unit is equipped with a special device for periodically drawing the workpiece away from the tool to remove waste. The linear dimensions of the part being machined A_p are related to the linear dimensions of the tool A_t by the simple equation $A_p = A_t \pm 2\Delta$ where Δ is the total eccentricity. The plus sign corresponds the case where a depression is formed on the workpiece (a projection on the tool) while the minus sign corresponds to formation of a projection on the workpiece (a depression on the master). This profiler is approximately 25 times as productive as conventional machining. Worn graphitized carbon electrodes may be resized periodically on the MA-459 profiler using the same master tool. Orig. art. has: 2 figures. SUB CODE: 13/ SUBM DATE none

KANDEL A.B.

Increasing the length of service of electrodes in salt baths. Sel'khozmashina no.5:32 My '55. (MLRA 8:6)

1. Zavod imeni "Oktyabr'skoy revolyutsii" (Furnaces) (Electrodes)

ANDEL USSR/Medicine - Physiology

FD-922

Card 1/1

Pub 33-5/29

Author

: Kandel', A. P.

diameterini in initia del comingnatione

Title

Characteristics of vascular reactions to expansion of arteries

Periodical

: Fiziol. zhur. 40, 289-294, May/Jun 1954

Abstract

Enough evidence has been collected, as result of experiments on dogs and cats, to make it evident that processes taking place in the walls of blood vessels influence their tonus and pressor reactions as well. Expansion of walls of arteries and increased blood pressure follow rapid injection a small quantity of physiological solution of sodium chloride into the central terminal of an artery. After novocain is introduced into the blood stream, pressor effect, resulting from expansion of arteries, disappears. Increased blood pressure (and expansion of arteries) is usually accompanied by decrease in size of kidneys and spleen which is in no way connected with excitation of vasoconstrictive nerve terminals. Diagrams. Eight Soviet and four non-Soviet references.

Institution

Chair of Normal Physiology, Kirghiz State Medical Institute,

Frunze

Submitted

February 20, 1952

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

CIA-RDP86-00513R000620330002-5 "APPROVED FOR RELEASE: 08/10/2001

KANDEL, A.P.

USSR/Human and Animal Physiology - Blood.

V-4

Abs Jour

: Ref Zhur - Biol., No 1, 1958, 3863

Author

: Yu.M. Gal'perin, A.P. Kandel'

Inst

Title

: An Analysis of the Mechanism of the Effect of Intra-

Arterial Transfusions.

Orig Pub

: Fiziol. 2h. SSSR, 1956, 42, No 7, 559-564

Abstract

: The authors studied the role of peripheral mechanisms in the cardio-vascular system stimulation in cases of intra-arterial blood transfusions after a complete and prolonged anemia of the central nervous system (CNS). They applied a modification of I.P. Pavlov's cardiopulmonary "preparat" / preparation ? J. Blood was circulating only in the small system and in the artificial system. In the latter, blood pressure was recorded. At various times after the beginning of the CNS anemia (from 20 up to 105 minutes), the animals were receiving

Card 1/3

Chair of Physiol, Freeze med School - Chair Normal Physiol.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

BAKIN, Ye.I., prof.; STEGAYLO, Ye.A., dotsent; KANDEL', A.P., kand.med.nauk

Conference of physiologists, biochemists, and pharmacologists of
Central Asia and Kazakhstan. Sov.zdrav.Kir. no.2:58-61 Mr-Ap '58.

(MRRA 12:12)

(SOVIET CENTRAL ASIA--PHYSIOLOGY) (CHEMISTRY, MEDICAL AND PHARMACEUTICAL)

KANDEL, E.I.; KUPARADEE, G.R.

Cryothalamectomy in lesions of the extrapyramidal system. Vop. neirokhir. 28 no.4:41-47 Jl-Ag 164. (MIRA 18:3)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni Burdenko (dir. - prof. A.I. Arutyunov) AMN SSSR, Moskva.

KANDEL!, Ye. I.

"Influence of the Acute Irritation of Various Parts of the Human Brain on the Blood Pressure, Heart Activity and Respiration." Sub 18 Jan 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

alinaka purkaturakan perakan Tahuan batusa marankasa sisa ini perakasanan minindeka ina tahi sa para 17-17. 1

KANDEL', YE. I.

Pituitary Body - Tumors

THILIPA AND FERRING MENTAL I DE DE L'ELE EN LE COMPANIENT MONTANTE MONTANTE DE L'ELE COMPANIENT DE L'ELE COMPA

Fifth neurosurgical conference dedicated to the memory of Academician Nikolay Nilovich Burdenko, Vop. neirokhir, 16, no. 2, 1952.

Manthly List of Russian Accessions, Library of Congress October 1952. UNCLASSIFIED

KANDEL!, YS. I.

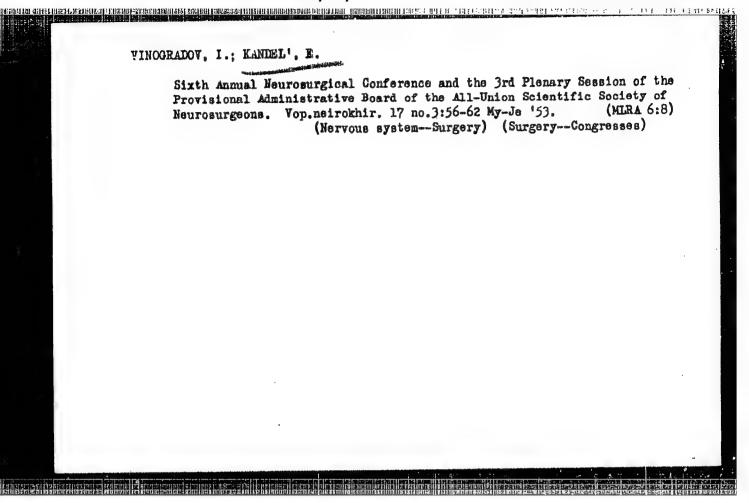
Vascular System

Observations of conditions of the cardiovascular system in tractotomy. Vop. neirokhir. 16 No 3 1952.

Monthly List of Russian Accessions, Library of Congress October 1952 UNCLASSIFIED

- 1. KANDELI, Ye, I.
- 2. USSR (600)
- 4. Spinal Cord
- 7. Scientific activities. Vop. neirokhir. 16 no. 6 1952.

9. Monthly List of Mussian Accessions, Library of Congress, March 1953. Unclassified.



KANDEL', Ye.I.; SFIRIN, B.G.; FARTALOVA, V.L.; FILIPPYCHEVA, N.A.

Result of an investigation of conditioned reflex functions in patients at a neurosurgical clinic. Vop. neirokhir. 18 no.3:21-31 My-Je '54.

(MERA 7:8)

1. Is Instituta neyrokhirurgii imeni akademika N.H.Burdenko Akademii meditainakikh nauk SSER.

(HEFLEX, COMDITIONED, in various diseases,

**Porain dise*

(BRAIN, diseases,

*manifest., conditioned reflex)

KANDEL! Ye.I.

History of the doctrine of tumors of the brain. Vop. neirokhir. 18 no.3:60 My-Je 154.

1. Iz Instituta neyrokhirurgii imeni akademika N.N.Burdenko Akademii meditsinskikh nauk SSSR. (BRAIN, neoplasms, hist. of research in Russia)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620330002-5"

KANDEL', E.I.

Assymetric arterial pressure in brain tumors. Vop.neirokhir. 19 no.3:14-20 My-Je '55. (MIRA 8-6)

1. Iz Nauchno-issledovatel'skogo ordena Trudovogo Krasnogo Znameni instituta neyro-khrurgii imeni akad. N.N.Burdenko Akademii meditsinskikh nauk SSSR.

(BRAIN, neoplasms, blood pressure in, assymetry) (BLOOD PRESSURE, in various diseases, cancer of brain, assymetry of arterial pressure)

TANDEL', E.I., kendidet meditsinskikh nauk

Brain surgery. Zdorov'e 2 no.10:9-11 0 '56. (MLRA 9:11)
(BRAIS-SURGERY)

KANDEL . Z. I.

Contrilled arterial hypotension induced ganglioblocking agents and its use in neurosurgery. Vop.neirokhir. 20 no.3:48-54 My-Je '56. (MIRA 9:8)

1. Iz nauchno-issledovateliskogo ordena Trudovogo Krasnogo Znameni instituta neyrokhirurgii imeni akad. N.N.Burdenko Akademii Meditsinskikh nauk SSSR.

(NERVOUS SYSTEM -- SURGERY) (HYPOTENSION)

WINCGRADOVA, I.N.; VIEHERT, T.H.; KANDEL', E.I. Thromboembolism of the heart and of the pulmonary following surgery of the spinal cord. Vop.neirokhir. 20 no.4:26-34 Jl-Ag '56. 1. IN Nauchno-issladovatel'skogo ordena Trudovogo Krasnogo Znameni instituta neirokhirurgii imeni akad. N.N.Burdenko Akademii meditsin-skikh nauk SSSR. (HEART, blood supply thromboembolism, caused by surg. of spinal cord) (ARTERISS, PULMONARY, dis. same) (SPINAL CORD, surg. causing thromboembolism of heart & pulm. arteries)

Use of ganglion-blocking agents in neurosurgery and in postoperative stages. Vop.neirokhir. 20 nc.6:3-9 N-D '56. (MLRA 10:2)

1. Iz Nauchno-issledovatel*skogo ordena Trudovogo Krasnogo Znameni Instituta neyrokhirugii imeni akad. N.N.Burdenko Akademii meditsinskikh nauk SSSR.

(BRAIN, surgery,
ganglion blocking agents in (Rus))
(AUTONOMIC DRUGS, therapeutic use,
ganglion blocking agents in brain surg. (Rus))

YEGOROVA, B.G., prof., Active Member of the Academy of Medical Sciences, and KANDELYA, E.I., Candidate of Medical Sciences.

为了自身,我们也不是有一种,我们就没有看到,我们就是一个人,我们就是一个人,我们就会会会会看到这一个人,我们就会会会会会会会会。""我们就是一个人,我们就是一个

"The Prophylazis and therapy of brain Edema and Acute Circulatory disturbances Occurring During Brain Injuries," Ganglion-blocking preparations were used in 220 operations..

Paper presented at 11th Session AMS USSR on Trauma, April 1957.

SO: Sum. 1644

KANDEL!, Eduard Izrailevich, kand.med.nauk; HENYUMOV, O.M., red.; GUBIK, M.I., tekhn.red.

[Achievements i modern anesthesiology; new methods of anesthesia and control of body functions in surgery] Dostizheniia sovremennoi anesteziologii; novye metody obezbolivaniia i upravleniia funktsiiami organizma v khirurgii. Moskva, Izd-vo "Znanie," 1957. 47 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.8, no.43) (MIRA 11:1) (ANESTHESIA)

YEGOROV, B.G.; KANDEL', E.I. kandidat meditsinskikh nsuk

Injuries of the central nervous system; from materials of the eleventh session of the general meeting of the Academy of Nadical. Sciences of the U.S.S.R. Veet, ANN SSSR 12 no.4:20-31 '57.

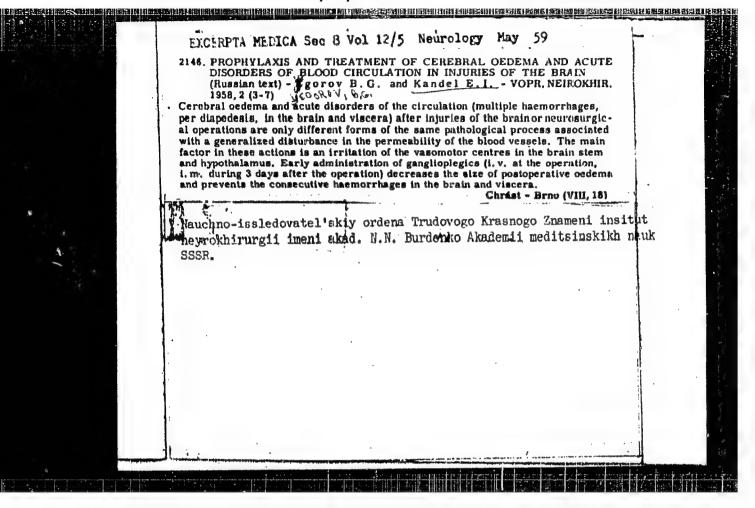
(NIRA 10:13)

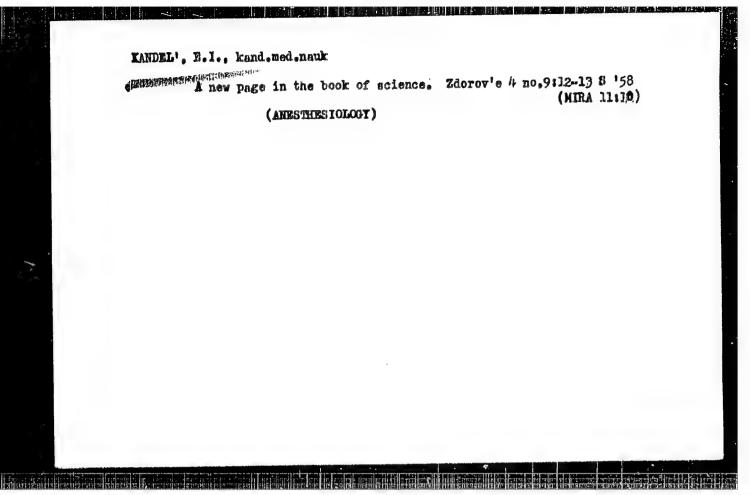
1. Deyetvitel'nyy chien ANN SSSR (for Tegorov)

(NERVOUS SYSTEM—MOUNDS AND INJURIES)

BRYUSOVA, S.S.; BLINKOV, S.M.; KANDEL', E.I.

First International Congress of Neurology in Brussels, July 21-28, 1957. Vop.neirokhir. 22 no.2:44-52 M.Ap '58, (MIRA 11:4) (MERVOUS SYSTEM.-DISEASES) (BRAIN.-SURGERY) (HYPOTHERMIA)





KANDEL', E.I., kand.med.neuk

Tumors of the optic thalamus. Probl.sovr.neirokhir. 3:165-127
(MIRA 16:6)

(CPTIC THALAMUS.-TUMORS)

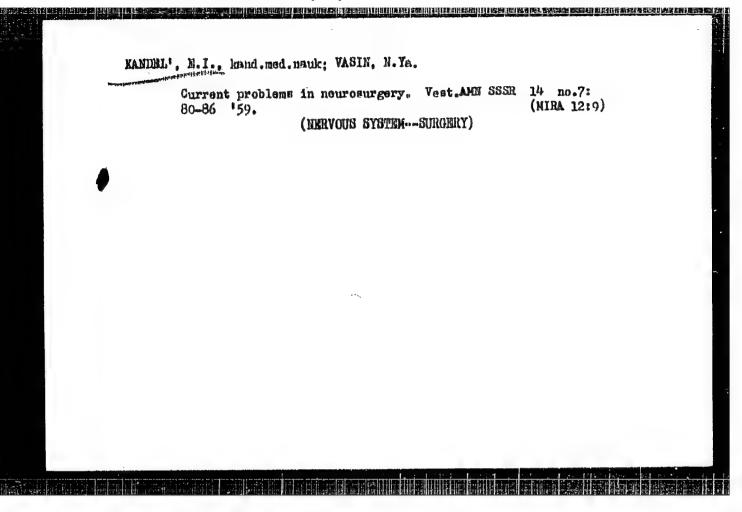
VIKHERT, T.H.: KANDEL', E.I.; LYASS, F.H.

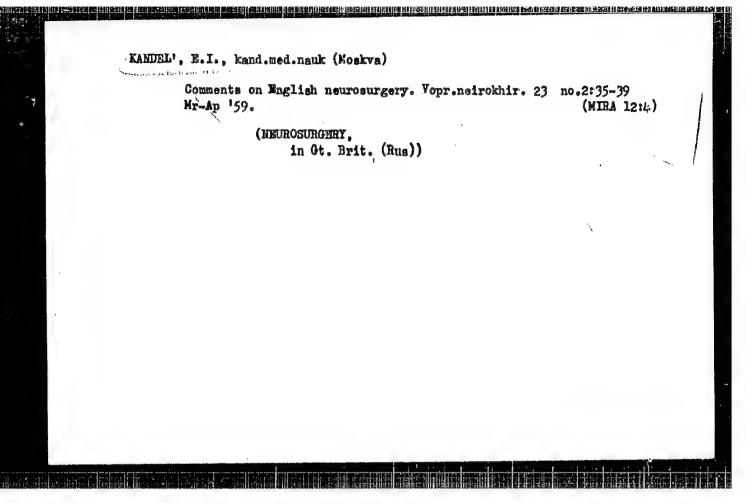
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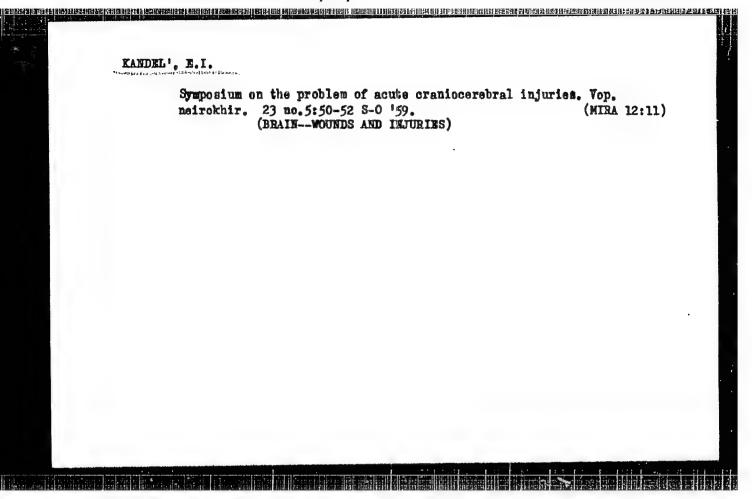
Experimental studies on reactive changes in the brain following intracerebral administration of radioactive colloidal gold. Hed.rad. 4 no.9:56-63 S '59. (MIRA 12:11)

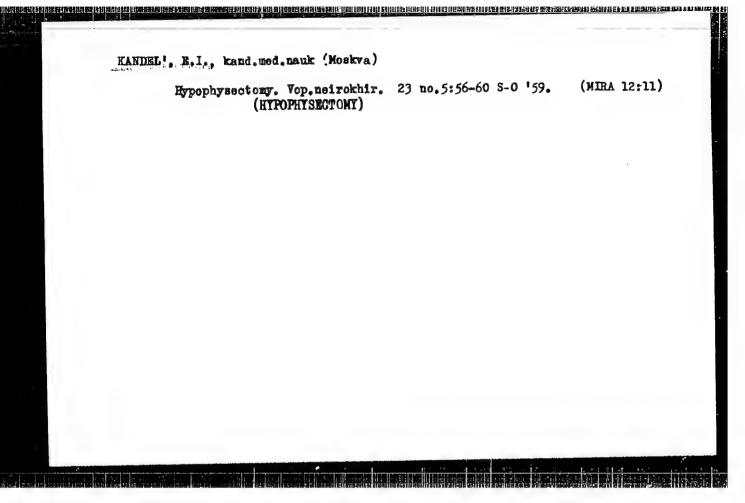
1. Iz Nauchno-issledovatel skogo ordena Trudovogo Krasnogo Znameni instituta neyrokhirurgii imeni akad. N.N.Burdenko AMM SSSR.

(GOLD radioactive)
(BRAIN radiation eff)









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GAL'PERIN, M.D., prof.; KANDEL', E.I., kand. med. nauk;

KORNYANSKIY, G.P., prof.; KORST, L.O., dektor med. nauk;

RAZDOL'SKIY, I.Ya., zasl. deyatel' nauki prof.; EMDIN, P.I.,

zasl. deyatel' nauki prof.[deceased]; EPSHTEYN, P.V.;

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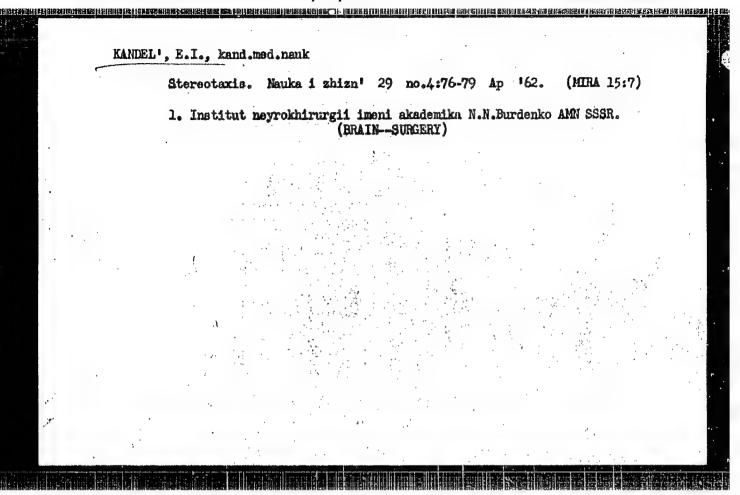
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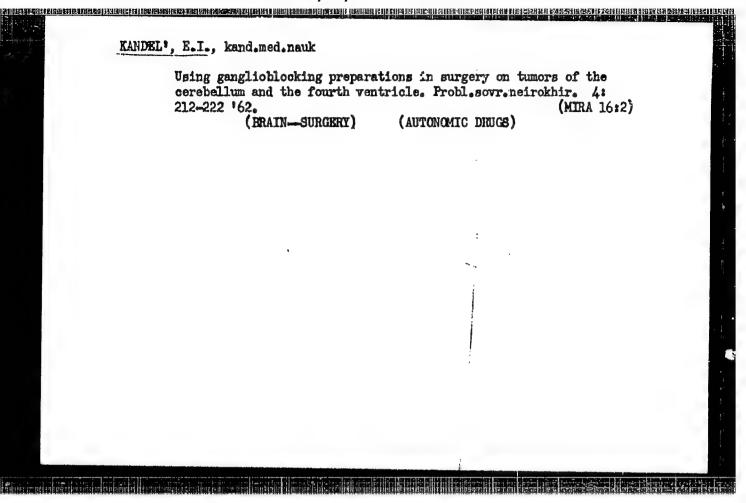
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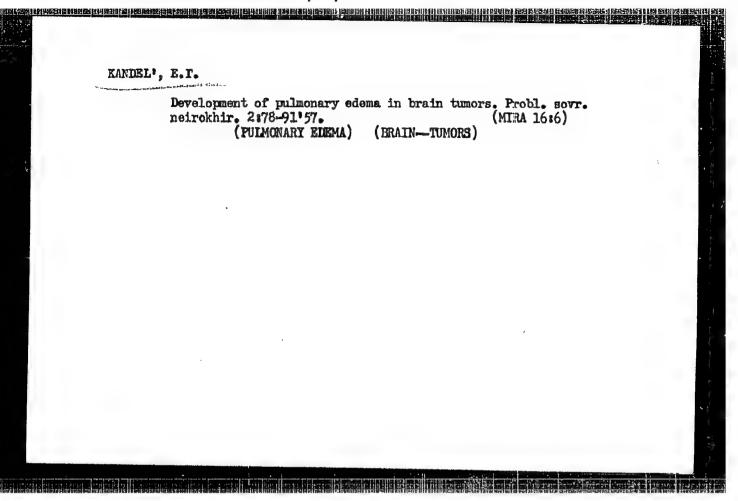
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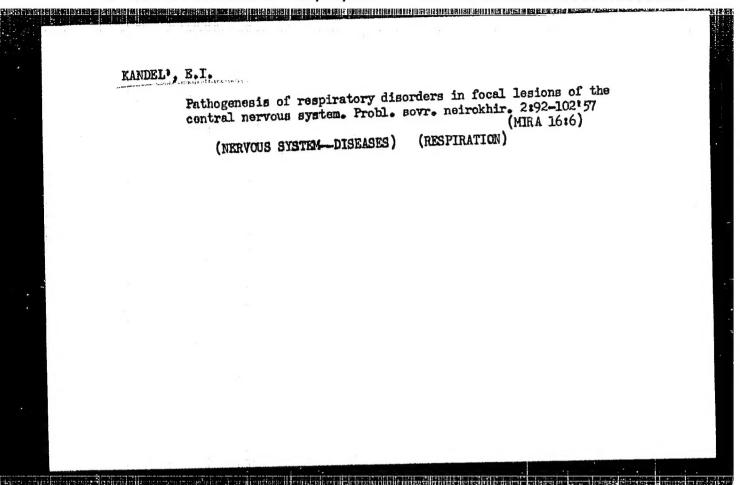


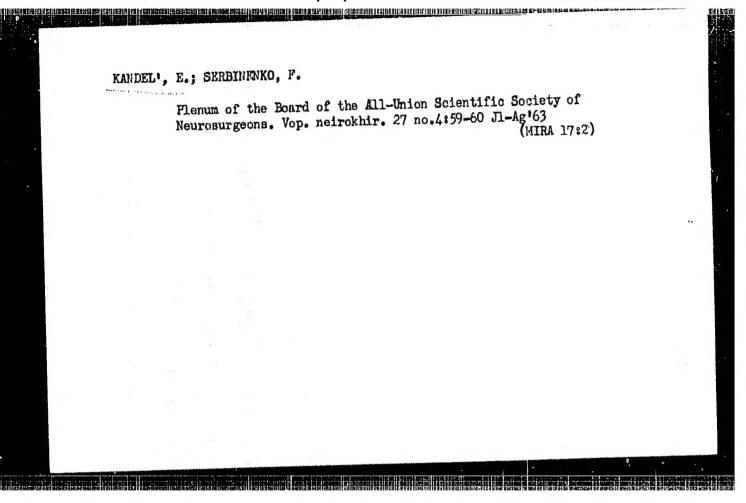
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